

Appendix [Supplemental Material]

Alternative Payment Models in Medical Oncology: Assessing Quality-of-Care Outcomes Under Partial Capitation

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Appendix A. Chemotherapy Codes

Code Type	Value
CPT	96401-96450, 96542-96549
ICD-9-CM Procedure	V58.1, V66.2, V67.2
HCPCS	964.xx, 96400-96549, Q0083-Q0085 (bladder instillation), J9000-J9999

ICD-9-CM, International Classification of Diseases, Ninth Revision, Clinical Modification

Appendix B. Complications related to Chemotherapy Codes

ICD-9-CM Diagnosis Code	Description
787.0	Nausea and vomiting
787.01	Nausea with vomiting
787.02	Nausea alone
787.03	Vomiting alone
536.2	Persistent vomiting
276.51	Dehydration

ICD-9-CM, International Classification of Diseases, Ninth Revision, Clinical Modification

Appendix C. Infection Related Codes Potentially Related to Cancer Surgery or Other Procedure

ICD-9-CM Diagnosis Code	Description
480	Pneumonia

481	Streptococcus pneumonia
482.xx-483.xx	Other bacterial pneumonia, pneumonia due to other specified organism
484.xx	Pneumonia in infectious diseases classified elsewhere
485	Bronchopneumonia, organism unspecified
486	pneumonia, organism unspecified
487.0	Influenza with pneumonia
[038.0 or 038.2 or 790.7] + [041.00 or 041.09 or 041.2 or 481]	[Streptococcal septicemia or pneumococcal septicemia or bacteremia] + [unspecified streptococcus or other streptococcus or pneumococcus or pneumococcal pneumonia]
038.9 + 041.2	Unspecified septicemia + pneumococcus
995.91	Sepsis (includes urosepsis)

ICD-9-CM, International Classification of Diseases, Ninth Revision, Clinical Modification

Appendix D. Ambulance Transport Codes

A0080	HCPCS	Nonemergency transportation, per mile - vehicle provided by volunteer (individual or organization), with no vested interest
A0090	HCPCS	Nonemergency transportation, per mile - vehicle provided by individual (family member, self, neighbor) with vested interest
A0100	HCPCS	Nonemergency transportation; taxi
A0110	HCPCS	Nonemergency transportation and bus, intra- or interstate carrier
A0120	HCPCS	Nonemergency transportation: mini-bus, mountain area transports, or other transportation systems
A0130	HCPCS	Nonemergency transportation: wheelchair van
A0140	HCPCS	Nonemergency transportation and air travel (private or commercial) intra- or interstate
A0160	HCPCS	Nonemergency transportation: per mile - caseworker or social worker
A0170	HCPCS	Transportation ancillary: parking fees, tolls, other
A0180	HCPCS	Nonemergency transportation: ancillary: lodging, recipient
A0190	HCPCS	Nonemergency transportation: ancillary: meals, recipient
A0200	HCPCS	Nonemergency transportation: ancillary: lodging, escort
A0210	HCPCS	Nonemergency transportation: ancillary: meals, escort
A0420	HCPCS	Ambulance waiting time (ALS or BLS), one-half (1/2) hour increments
A0422	HCPCS	Ambulance (ALS or BLS) oxygen and oxygen supplies, life sustaining situation
A0424	HCPCS	Extra ambulance attendant, ground (ALS or BLS) or air (fixed or rotary winged); (requires medical review)
A0425	HCPCS	Ground mileage, per statute mile
A0426	HCPCS	Ambulance service, advanced life support, nonemergency transport, level 1 (ALS 1)
A0427	HCPCS	Ambulance service, advanced life support, emergency transport, level 1 (ALS 1 - emergency)
A0428	HCPCS	Ambulance service, basic life support, nonemergency transport, (BLS)
A0429	HCPCS	Ambulance service, basic life support, emergency transport (BLS, emergency)
A0430	HCPCS	Ambulance service, conventional air services, transport, one way (fixed wing)
A0431	HCPCS	Ambulance service, conventional air services, transport, one way (rotary wing)
A0432	HCPCS	Paramedic intercept (PI), rural area, transport furnished by a volunteer ambulance company which is prohibited by state law from billing third-party payers
A0433	HCPCS	Advanced life support, level 2 (ALS 2)
A0434	HCPCS	Specialty care transport (SCT)
A0435	HCPCS	Fixed wing air mileage, per statute mile
A0436	HCPCS	Rotary wing air mileage, per statute mile

A0888	HCPCS	Noncovered ambulance mileage, per mile (e.g., for miles traveled beyond closest appropriate facility)
A0998	HCPCS	Ambulance response and treatment, no transport
A0999	HCPCS	Unlisted ambulance service
T2007	HCPCS	Transportation waiting time, air ambulance and nonemergency vehicle, one-half (1/2) hour increments
0540	REV	AMBULANCE - GENERAL
0541	REV	AMBULANCE - SUPPLIES
0542	REV	AMBULANCE - MEDICAL TRANSPORT
0543	REV	AMBULANCE - HEART MOBILE
0544	REV	AMBULANCE - OXYGEN
0545	REV	AMBULANCE - AIR AMBULANCE
0547	REV	AMBULANCE - PHARMACY
0548	REV	AMBULANCE - TELEPHONE TRANSMISSION EKG
0549	REV	AMBULANCE - OTHER AMBULANCE

Appendix E. Unadjusted Outcomes During 6 month Follow-up, Frequency of Utilization and Mean Number of Events

	Capitated		FFS		P value ¹
	Pre-Contract	Post-Contract	Pre-Contract	Post-Contract	
N	165	305	55	188	--
All-Cause Hospitalizations					
n (%)	34 (20.61%)	81 (26.56%)	13 (23.64%)	42 (22.34%)	0.49
mean number, SD	0.28 (0.65)	0.42 (0.85)	0.35 (0.78)	0.35 (0.84)	0.39
Chemotherapy-Related Complications²					
n (%)	17 (10.30%)	55 (18.03%)	7 (12.73%)	35 (18.62%)	0.10
mean number, SD	0.21 (1.10)	0.66 (2.22)	0.55 (1.90)	1.09 (6.47)	0.18
Complications Potentially Related to Cancer Surgeries and Procedures³					
n (%)	19 (11.52%)	32 (10.49%)	8 (14.55%)	19 (10.11%)	0.80
mean number, SD	0.20 (0.70)	0.33 (1.33)	0.31 (1.00)	0.31 (1.24)	0.68
Ambulance Use					
n (%)	21 (12.73%)	59 (19.34%)	8 (14.55%)	25 (13.30%)	0.17
mean number, SD	0.23 (0.82)	2.57 (11.16)	0.29 (1.03)	0.46 (2.11)	0.001
Nonemergency, n (%)	9 (5.45%)	36 (11.80%)	2 (3.64%)	13 (6.91%)	0.04
mean number, SD	0.10 (0.61)	2.43 (11.14)	0.07 (0.42)	0.31 (2.00)	0.001
Emergency, n (%)	18 (10.91%)	38 (12.46%)	8 (14.55%)	18 (9.57%)	0.68
mean number, SD	0.15 (0.52)	0.17 (0.53)	0.20 (0.56)	0.14 (0.51)	0.88

¹Chi-square tests (binary outcomes) and analysis of variance (ANOVA) (continuous outcome variables) for comparisons across study groups

²Nausea, vomiting or dehydration on any physician, outpatient, urgent care, inpatient or emergency department services claim

³Pneumonia, septicemia and sepsis on any physician, outpatient, urgent care, inpatient or emergency department services claim